CHAPTER 2 RECRUITMENT

2.1 Purpose

To identify potential participants within the target population and educate them about the study in the hope that they will be willing to enroll and participate.

2.2 Recruitment Strategies

Several general strategies will be key to patient recruitment, including identification of participants and developing relationships with nephrology and surgical practices. Each clinical center will also develop specific strategies that fit best to the individual center and its associated facilities.

2.2.1 Target study population

The first step for successful recruitment of study participants is identification of eligible patients. The target study population is patients on hemodialysis (prevalent patients) who are scheduled to undergo surgery for arteriovenous fistula (AVF) creation or patients with advanced chronic kidney disease (stage 4 or stage 5) who are expected to start hemodialysis within three months of AVF creation (incident patients).

2.2.2 Identification of potential study participants

Each center has specific patterns of referrals for vascular access surgery. Vascular access coordinators or personnel in nephrology practices, renal clinics, hospitals and dialysis units usually initiate the referral process for access surgery. Ultimately, all patients are evaluated by a surgeon for creation of AV access. According to the surgical practice, a surgical access coordinator, lead nurse, scheduler, receptionist, or the surgeon will keep a list of all patients scheduled for fistula creation.

It will be the responsibility of the HFM Study personnel to regularly review the lists of patients referred for access surgery and scheduled for fistula creation to identify potential study participants.

2.2.3 Recruitment steps

Efforts to promote awareness about the study will be key to facilitate patient recruitment. Principal investigators should directly notify participating surgeons and access coordinators as well as affiliated nephrology practices, hospitals, and interventional radiology and nephrology practices about the study. It is recommended to inform collaborators prior to initiation of the study and to keep collaborating personnel/facilities updated on the progress of the study.

Important strategies to raise awareness about the study include direct visits to participating practices and facilities, posting of signs about the HFM Study, regular communications by phone, letters and emails, and offering education seminars/"in-services". Providing formal notification to the affiliated practices at the time any patient is enrolled in the study is an opportunity to facilitate coordination of care and further raise awareness about the study.

Patients identified as potential study participants should be approached individually with information about the study once the participating surgeon has made a decision that the patient will undergo surgery for fistula creation. Ideally, the initial patient contact should be during a

face-to-face visit. Patients should receive information about the problem of AV fistula maturation failure, the rationale for the HFM Study, and general information about the components of the study. Patients (and family members if appropriate) should be encouraged to ask questions.

Ideally, the study coordinator can proceed with enrollment of study participants at this time. If patients prefer, the study coordinator can also contact them at a later time after this initial discussion and enrollment can occur during a future visit.

2.3 Participant Selection/Eligibility and Exclusion Criteria

2.3.1 Inclusion criteria

Inclusion criteria for patient eligibility are:

1. Planned single/surgery for creation of an autogenous upper extremity AV fistula by a surgeon participating in the study.
2. Currently on chronic dialysis, or expected to be started on chronic dialysis at a participating dialysis facility within three months of planned AVF creation surgery.
3. Age less than 80 years, if not yet on chronic hemodialysis; otherwise no upper age limit.
4. Age allowing legal consent without parental involvement (greater than 18-21 years, depending on individual state regulations).
5. Life expectancy greater than or equal to nine months.
6. Ability to give informed consent.
7. Anticipated ability to meet all study protocol requirements.

Special note related to inclusion criteria #7 for home hemodialysis patients:

Patients who will be dialyzing at home must have the willingness and skills to complete all necessary data collection. It is up to the discretion of the Principal Investigator whether the necessary data can be obtained.

The patient must be able to complete the Cannulation Form from the first cannulation attempt to the first successful cannulation.

The patient will need to obtain blood pump speed data every 30 minutes from the start to the end of dialysis at every dialysis session from the time of the first successful cannulation until maturation. The Clinical Maturation Form will need to be completed for each dialysis session until fistula maturation, and then monthly until the end of the study.

The Monthly Follow-up Form will also need to be completed monthly from the time of surgery until the end of the study.

2.3.2 Baseline dropout criteria

Patients initially enrolled will be dropped from the study if either of the following occurs:

1. Critical data to be collected prior to AV fistula creation surgery are missing. These data are (a) pre-operative ultrasound on the arm where the study fistula was created, and (b) vascular function testing.
2. Surgery performed by a surgeon not participating in the study or vascular access other than an upper extremity AVF.

2.3.3 How to re-enroll a dropped patient

Patients who were dropped from the study **before fistula surgery**, but now appear eligible, can be re-enrolled. The patient's original ID must be used (do not assign a new PID) and the following steps are taken:

1. Re-consent patient if required by your IRB
2. Send an inquiry to the DCC to delete the Form 240 (Baseline Drop Out or Not Eligible to be Followed) from the database. Note on your paper form the date the form was deleted and retain in your patient's chart.
3. If any of the pre-operative testing was done >90 days before AVF creation, it will need to be repeated; i.e., pre-operative ultrasound, vascular function studies, and/or blood collection (except DNA).
4. Baseline Forms 202-206 should be repeated if completed >9 months before AVF creation (e-mail DCC when this has been done so old forms can be moved and new forms entered into the database).

Note: If a patient was enrolled in the study and had an AVF created, this patient cannot be re-enrolled in the study for any reason (including creation of a brand new AVF after drop-out, fistula abandonment or transplant).

2.4 Informed Consent

2.4.1 Types of consent

Informed patient consent is required for patient participation in the study. Patients will be asked to provide consent for participation in the study, review of medical records, and sharing of medical information among investigators. In addition to the main study consent, study participants will be asked to specifically consent for submission of blood (for biomarkers and DNA), venous specimens, and for use of their social security number for future linkage to USRDS. All centers will use IRB-approved consent forms individualized for their institutions.

Patients can still enroll in the HFM Study even if they do not consent to collection of blood samples for biomarkers/DNA or collection of vein samples.

2.4.2 IRB Approval

Every participating clinical center will obtain official approval of the study by the local IRB prior to enrollment of any patients. Study participants will be required to sign the IRB-approved local informed consent form prior to participating in the study.

2.4.3 Ready to enroll

Patients will be ready to enroll upon obtaining the following information:

1. Informed consent
2. Screening data
3. Baseline data

2.4.4 How to consent patients

Informed consent will be obtained before patients participate in any study-related activity. Informed consent will be obtained during a face-to-face visit by the study coordinator (and/or investigator) with the patient and, if appropriate, family member or trusted advisor. Patients will be given adequate time to review the informed consent document approved by the local IRB. Patients will be given opportunity to ask questions before signing the consent and the option of not participating in the study.

Consent forms in languages other than English can be used if approved by the local IRB. Patients who cannot read will be given the opportunity of having the informed consent form read and then to sign the form in the presence of a witness.

Original signed informed consent forms will be kept at each clinical center according to local IRB policies.

2.4.5 Screening/consent visits

The following screening/consent information (forms) will be completed as part of recruitment/informed consent:

- Form # 207, HFM Study Patient Future Linkage with USRDS
- Form # 201, HFM Study Screening Form

2.5 Sequence of Procedures

The study participants will undergo an initial screening/enrollment visit. In some instances, screening and enrollment will be during the same visit; although on other occasions can be during different patient visits. Baseline evaluation with completion of medical history, examination, and blood draw will occur next. The next set of procedures will be related to the pre-operative evaluation, including vascular ultrasound, arterial flow-mediated dilation, arterial pulse wave velocity, and venous plethysmography. The peri-operative visit will include surgical procedure data, peri-operative observations, and vein tissue collection. A day one visit will include vascular ultrasound. A two week visit will include blood draw and vascular ultrasound. A week six visit will include vascular ultrasound. There will be monthly phone contacts with patient or dialysis unit until the end of the study. Some patients will also undergo repeat vascular

ultrasound later in the study under special circumstances (such as prior to fistula abandonment or late cannulation).

2.6 Confidentiality

All patient related information will be considered confidential and only available to study investigators and study personnel. Patient-specific information will be deidentified prior to submission outside of the individual institution.

2.7 Evaluation of Recruitment and Retention

Recruitment and retention of participating patients is critical for successful completion of the study. The DCC will provide weekly counts of actual study enrollment as compared to target goals for enrollment. The steering committee will regularly monitor progression of study enrollment for individual sites and for the entire study. A subcommittee of representatives from each clinical center will regularly review strategies for study enrollment and retention of participating studies. Strategies proven successful in individual centers will be promptly disseminated to other participating centers and resources made available to maximize study enrollment and retention.

Appendix: Template Consent